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ABSTRACT

Focusing on the role of intertextuality as young children learn to communicate through writing, art, and music during the course of usual classroom activities, an ethnographic study investigated: (1) how children's understanding and use of written language, music, and graphic/constructive art are embedded in the social worlds of their classroom; and (2) what socio-psychological strategies young children use to explore the potentials of these forms of communication. Subjects, 21 three- and four-year-olds in a daycare program at Indiana University, were observed over eight months as they participated in two self-selected activity periods during which they were allowed to direct their own literacy learning. Teachers provided literacy demonstrations by composing their own written, artistic, or musical texts. Observations during this period indicated two general types of intertextual connections that were important in the literacy learning setting. The first type occurred when children linked their existing knowledge about literacy to the demonstrations provided by other authors. The process of mutual intertextualizing which occurred through conversation and demonstration seemed to lead to the formation of shared meanings about literacy and allowed members of the same authoring community to use literacy to communicate with others. The second type of intertextual connection reflected the mediated nature of literacy learning. Children seemed to interpret their experiences by flexibly linking their current observations to aspects of their past experiences by creating context-specific hypotheses about literacy. Several features of the classroom served to support this kind of learning. (Seventeen references are included.) (JD)

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LITERACY LEARNING AS AN INTERTEXTUAL PROCESS

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Running Head: Literacy Learning

Paper presented at the Annual Meeting of the National Reading Conference in Austin, TX December 2-6, 1986

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LITERACY LEARNING AS AN INTERTEXTUAL PROCESS

Beaugrande and Dressler (1981) have defined intertextuality as the "ways in which the production and reception of a given text depends upon the participants' knowledge of other texts" (p. 182). When *text* is defined broadly as any unified chunk of meaning, the process of constructing intertextual ties can be seen more generally as a metaphor for learning or cognition. Rosen (1984) has suggested that the creation of a narrative -- a text-- involves the establishment of arbitrary boundaries in a continuous stream of experience and that it is by constructing a framework for interpreting experience that we are able to give it meaning. Because this interpretive framework is itself made of texts formed on other occasions, text construction is always an *intertextual* process. Learners can make sense of new texts only by making connections to their existing ones. From this perspective, the process of constructing understandable "stories" from the flow of daily events is a primary cognitive act (Hardy, 1978). And this act necessarily involves tying evolving texts to existing ones, as well as making new connections between existing texts. Seen in this way, intertextual tying is an integral part of the interpretation of linguistic texts, and more generally a way of making sense of the world.

But how does this "connection-making" process occur, and what role does it play in the literacy learning of young children? These are questions which emerged as an important focus of the ethnographic study of literacy learning reported in this paper. Generally, the purpose of this study was to explore how young children learn about literacy in the course of their usual classroom activities. More specifically, I proposed two broad research questions which allowed me to take both an individual and a social perspective on this learning:

1. How are children's understandings and use of written language, music, and graphic/constructive art embedded in the social worlds of their classroom?
2. How do young children explore the potentials of these communication systems? More specifically, what socio-psychological strategies do they use?

These initial research questions were also focused broadly enough to allow me to observe children's attempts to simultaneously learn to communicate using a number of "alternate literacies" (Harste, Woodward, & Burke, 1984) -- a research decision based on a semiotic perspective on communication which suggests that literacy involves the use of multiple sign systems and that a similar process of signification underlies communication regardless of the sign system involved.

As Hymes (1978) has suggested it is the essence of the ethnographic method that initial research questions are refined and developed through the dialectic which occurs as the ethnographer reflects on the results of ongoing data analysis and plans subsequent phases of data collection. Early in this study, several patterns related to the ways in which my 3- and 4-year-old informants linked their texts to those of others and to their own past texts emerged as an important focus of the study. My observations of these children over an 8 month period suggested that the construction of intertextual ties had both social and individual features, and that intertextuality was central to learning. The purposes of this paper are to describe the patterns of intertextual tying I observed as I watched this group of 21 children learning to communicate through writing, art, and music and to present the theoretical hypotheses which I generated to describe the role of intertextuality in the literacy learning process.

METHOD

Setting and Paticipants

The setting for this research was a daycare program which served the 3- and 4-year-old children of faculty and staff at Indiana University. Of the 13 boys and 8 girls who participated in the research, 15 had parents who were faculty or graduate students, and 6 had parents who were employed in staff positions at the University or elsewhere in the community. In September, 13 of the children were 3-year-olds, while 8 had already passed their fourth birthday.

This setting was chosen specifically because the director and teachers had developed a curriculum which supported young children's literacy learning by encouraging them to engage in literacy activities for functional purposes, and by valuing their communicative efforts regardless of the conventionality of the resulting product. Each day during two self-selected activity periods, youngsters were allowed to direct their own literacy learning by chosing how, when, and why they would participate in literacy activities. At these times children could choose to work at the writing table, the art table, the book area, the piano, or at other centers such as the block area or housekeeping corner. Teachers provided literacy demonstrations by authoring their own written, artistic, or musical texts at these centers. They also acted as audience for the texts children were producing. In this way, children were encouraged to learn about literacy by using it, and literacy instruction was embedded in informal discussions about in-process authoring activities.

Data Collection Procedures

Insert Figure 1 about here.

As seen in Figure 1, this research proceeded through four phases in which the focus of data collection, the amount of time spent in the classroom, and the data collection techniques varied. In the first phase of the research I entered the classroom and focused on becoming familiar with the setting and on negotiating my role with the children and teachers. My major data collection technique during this period was participant/observation. As my participatory role in the classroom developed, the children came to view me as an assistant teacher. I talked and worked with them throughout their day in much the same way as their classroom teachers, with three exceptions: (1) I only rarely directed group activities, (2) I spent the majority of my time observing and participating in literacy activities, and (3) I consistently used a variety of techniques to record classroom interactions.

As seen in Figure 1, starting in the second month of the study I began to use several new techniques to record classroom interactions. These included fieldnotes in the setting, audiotape, photography, and informal interviews with the children about their literacy activities. I also began to provide the classroom teachers with copies of my expanded fieldnotes and the artifacts I had collected. Through informal conversations and indefinite triangulation sessions (Cicourel, 1975; Denzin, 1978) they shared their perspectives on my observations as well as discussing their own observations of children's literacy learning. Though I collected data during all parts of the school day, the most intensive periods of observation involved children's self-selected activities at the writing table, the art table, and the piano. For

the next three months I looked for patterns in children's literacy activities and developed tentative hypotheses about their learning.

In the third phase of the study I specifically focused on collecting data which would help to refine these hypotheses. Theoretical sampling was used to focus my observations during this period, and videotape was used to record these literacy events. The final phase of data collection occurred as I gradually lessened my participation in the classroom. Though the major focus of my research activity shifted to data analysis during this period, I used my classroom observations to further refine and test my hypotheses about literacy learning.

Data Analysis Procedures

Data analysis was ongoing throughout the research using the constant comparative method (Glaser & Strauss, 1967). I reviewed and coded the data weekly in search of patterns leading to working hypotheses about literacy learning in this setting. In addition I wrote methodological and theoretical notes to document my research decisions and the hypotheses, so that the steps leading to the theoretical propositions could be retraced. As mentioned above, the field note data and developing hypotheses were discussed frequently with the teachers to add the perspectives of other classroom participants. Regular discussions with a peer debriefer (Lincoln & Guba , 1985) and with other colleagues outside the setting also added new perspectives on methodological and theoretical issues.

During the period of Field Exit, and after withdrawing from the classroom, data analysis continued with transcription and microsociolinguistic analysis of the video tape data, as well as with additional analyses of the field notes and artifacts to refine hypotheses about literacy learning. The video tapes were also used to further explore the nature of the interpretive work individual children engaged in during these

events. Microanalysis of the social interaction in selected literacy events was aimed at refining hypotheses related to the role of social interaction in literacy learning. In addition I tracked each child's literacy learning through the data to look for patterns in individual children's learning over the 8 months covered by the study. After completing a first draft of the research report, a member check (Lincoln & Guba, 1985) was conducted by asking the classroom teachers to respond to the accounts of events and the interpretations presented in the draft. Their comments were used to extend and clarify some points in final versions of the report. (For a more detailed description of both Data Collection Procedures and Data Analysis Procedures see Author, 1986).

RESULTS AND DISCUSSION

My observations of the literacy learning of this group of young children suggest that the construction of intertextual connections is a central part of this process. In this section I will discuss patterns in the data which support this contention and present my hypotheses about the role of intertextuality in literacy learning. Presented first are examples illustrating how children linked their texts to those of their classmates and teachers. This is followed by a discussion of the manner in which children constructed links between their existing cognitive texts to form new literacy knowledge.

Intertextuality as a Social Process

One of the patterns most readily observed in the literacy activities of children and teachers in this classroom was the extent to which they had developed a shared register for literacy events (Halliday, 1975) . This shared knowledge included not only the content of their graphic and musical texts, but also the processes or strategies they used, the structural aspects of texts such as genre and conventions, and the purposes for which they used literacy in the classroom. Figure 2 provides examples of the content themes

and genre which were common across the entire group of children in this class.

Insert Figure 2 about here.

By carefully examining the videtapes of events in which children made obvious connections between their texts and those of other participants I formed the hypothesis that conversation and observation of the demonstrations of others played an important role in the construction of this type of intertextual link in this setting. Example 1 demonstrates how this process occurred.

Example 1: Exclamation Points
February 25, 1986 (Videotapes 28,29)

One of the nap teachers is in the hospital, so we are making a "Get Well" book for her. Kira watches as I write my message, "Dear Carol, We hope you get well SOON ! ! ! (Artifact 1A).

As I wrote the last word, I read the letters out loud. "S O O N, exclamation point, exclamation point, exclamation point. Because I want her to get well soon!" Hana asks me what it says, and I read the message again.

Kira struggles with the word and adds, "And this is extamation point. How come?"

"Put three cause it's big letters Hana suggests.

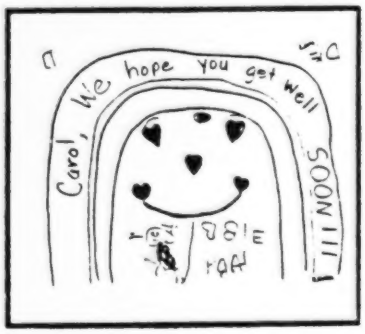
"Because I want her to get well really, really, really soon. I want to emphasize that," I explain.

As we work Kira brings up exclamation points again, and we discuss them. Then Christina who is working at the other side of the table joins the conversation. "I have to put too much exclamation points," she says as she begins to write exclamation points under her name. (Artifact 1B) (6) "Look, Debbie, look! I did just like you did!" She adds more exclamation points.

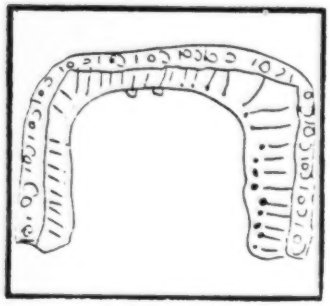
Now Hana begins her picture for Carol. (Artifact 1C) When she is finished she shows it to Susie, one of the classroom teachers. "Carol's really gonna like this one," she says. "There's a question mark --"

"Exclamation point," Susie corrects.

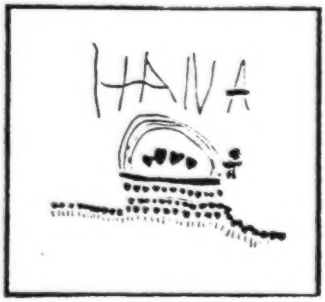
"--exclamation point because I really want her to get well quicker!"



Artifact 1A



Artifact 1B



Artifact 1C

In this event as in most events at the piano, writing table, and art table, conversation and demonstrations were linked as integral parts of a literacy event which was familiar and functional for the participants. When an unfamiliar idea was introduced in conversation or in another author's text, the participants had access to many other sources of information about that concept. For example, when I introduced exclamation points as part of my "Get Well" message for Carol, the children were able to explore the meaning of that punctuation mark in relation to our shared feelings for Carol and our shared understanding of the purpose for using literacy in this situation. They were also able to observe how I used exclamation points in my text, to talk about it, to ask questions about it, to try it out in their own texts, and then to share their new ideas about exclamation points in conversation. In addition as we talked about our texts, the children and I were carefully tracking the meanings formed by our audience and adjusting our conversation so that so shared meanings could be reached. Kira demonstrates this type of semantic tracking (Halliday, 1975) when she questions me about "extamotion points."

Literacy events in the classroom frequently provided *interactive demonstrations* of the sort illustrated above. That is, they provided opportunities for children to *observe* another author at work, to *talk* with that person in order to expand and develop their ideas, to *observe* again, and often to *incorporate new ideas* into their own texts. Sometimes children used the demonstrations of others as starting points for developing their own ideas as Christina and Hana did in Example 1. At other times, children chose to use available demonstrations conservatively; that is, they chose to stick as closely to the demonstration as possible until they felt they understood it fully. In either case, the construction of intertextual ties appeared to be

supported by social interaction in which: (1) the activities of other authors were familiar and understandable, (2) the participants worked collaboratively to reach shared meanings through conversation, and (3) conversation and demonstration were linked to form interactive demonstrations. It was by observing the demonstrations of others and by exchanging meanings in conversation that children formed shared meanings about literacy.

Intertextuality as an Individual Process

Despite the many intertextual connections that children and teachers formed as they interacted with one another at the writing table, art table, and piano, there remained differences in their texts and in their interpretations of literacy events. The difference in the meanings constructed by individual participants was highlighted for me one day as Ginny and I were working at the writing table. This event is described in Example 2 below.

Example 2: We Both Have Rings
February 3, 1986 (Videotape 12)

"February third," I say as I begin to write a note. "Dear . ."

"D," Ginny guesses.

"Nope, this name starts with a K."

"Katie," she guesses.

"So does Katie, but there's another friend. She's very close to us," I hint.

"Kira!"

"Right!" I say.

Ginny lays her hand next to mine. "Debbie! We've both got rings and my sister and Daddy and Melanie got a ring too!"

"Um hum. Everybody in your family has rings," I reply continuing to write. Then I stop to see that Ginny is still looking closely at her ring and my wedding rings. I lay my hand out beside hers. "Yeah, we both do have rings on today, don't we!"

"And you know what! At my Daddy's house I have a family of rings at my Daddy's house. I have a ring."

In this event, I found myself surprised that Ginny had introduced a discussion of rings into the conversation. Just a moment before we had been talking about my note and I assumed that she was attending to some aspect of

that demonstration. Her next comments, however, indicated that she and I were attending to entirely different aspects of the event. As contradictory as it may seem, differences in the texts or meanings formed by individual participants can also be explained by the notion of intertextuality. Because this event was puzzling to me, I mentioned it to one of the classroom teachers. She was able to solve the mystery by explaining that Ginny's father had been remarried over the weekend and Ginny and her sister now had a new step-mother living at their house. In this case Ginny was interpreting events at the writing table by linking them to her recent experiences with rings. Though my rings had been available as signs during the preceding six months, it was only after her personal experiences had highlighted the relationship between rings and families, that she interpreted that part of the meaning potential of this literacy event. Quite literally, the cognitive texts to which Ginny and I linked our interpretations of the event affected what we saw and what we learned. This example illustrates that children were also constructing ties to their existing cognitive texts in order to form hypotheses about the meaning of literacy events. Because participants have different stocks of experiences, the meanings they construct are only partially shared.

The pervasiveness of this second type of intertextual linkage was highlighted by my examination of individual children's learning over time. After tracking each of the 21 children through the data, I observed that in each literacy event their behavior could be seen as connected to previous events in which they had participated. Over time, children seemed to focus their learning around a number of themes related to personally interesting content areas, processes, and social uses for literacy. Then in order to meet the demands of specific communicative situations they flexibly

connected their existing knowledge in new ways to solve their communicative problems.

To illustrate this, in Figure 3 I have depicted two of the learning themes Gibson pursued early in the study. The first group of events is linked by his exploration of the *conceptual* theme of spiders, and the second by his exploration of the *process* of folding paper and then cutting it. This sequence of events began near the end of September when Gibson drew three picture of spiders webs and spiders and gave them to Mary. He then dropped this theme for almost two weeks. In the mean time, he began to explore the process of folding/cutting as well as other themes not depicted in Figure 3. On October 2, he observed Hana folding and cutting paper to make intricate snowflakes. After realizing that he did not know how to make snowflakes, he watched Hana carefully. His first attempt yielded an oval. After examining it closely, he discarded it and watched Hana again. On his next attempt he modified his hypothesis to include a second cut from the center of the fold. The result was an oval with a hole in the center, which we later dubbed a "bagel." Later in the day as he was cutting bagels, Gibson accidentally produced a heart. Though he found this occurrence extremely exciting, he found that he could not reproduce his discovery. Each time he tried, he produced an oval with an indent at the top--a form he called an "apple." As he explained this situation to one of his friends, "I can only cut one a day, I guess." He left school without cutting another heart, despite numerous attempts. When self-selected activity time began on the following day Gibson rushed over to the art table, folded some paper and cut a heart on the first try. In response to my question as to whether he had practiced at home, he replied, "No, but I thought about it." With this success, Gibson cut many more hearts of various sizes and shapes.

The following week brought a return to the spider theme. Gibson drew several spider pictures, stapled them into a book, and read it to me and several of his friends. Later in the afternoon, he composed a spider song to accompany his book, and with his teachers, learned to play it on the piano. Together they also recorded the tune on staff paper so that they could play it on another day. It was two days later when Gibson began a literacy event which led him to construct a connection between his conceptual theme of spiders and his processual knowledge about folding and cutting. This event is described in Example 3 below.

Example 3: Spider Record

Thursday, October 10, 1985 (Audio tape 4)

Gibson has just completed the drawing seen in Artifact 3A. He calls me over to the record player.

"You know what?" he says. "This is a record and if you played, it it would go--." He makes a face and puts it on the turn table under the needle.

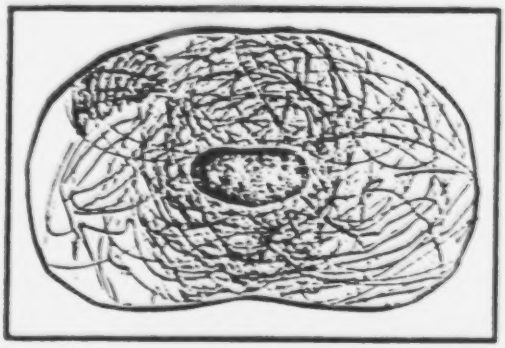
"It would make spider sounds?" I ask.

He nods.

We talk about the kinds of sounds spiders might make and the difficulties associated with records made of paper.

In the midst of this conversation Gibson stops and looks at his picture with concentration. "I'm gonna make this picture into a circle," he says and rushes away to the art table. Some minutes later, Gibson comes to find me again. He holds up his spider record with excitement. As seen in Artifact 3B, he has folded the picture in half and trimmed the edges to make a semicircle. Then he has cut a small piece from the center of the fold to make it look more like a record.

Artifact 3A



Artifact 3B

In this event Gibson attempted to produce a graphic text which expressed a new concept he had constructed -- a spider record. He began

the event by using his existing hypotheses about drawing spiders and spiderwebs. However, as he reflected on the result, he recognized the possiblity of making an innovative connection between his *conceptual* knowledge about records (i.e., records are round and have a hole in the middle) and his knowledge of cutting and folding *processes* (i.e., he can cut "bagels"). By constructing a new link between aspects of his existing knowledge, he was able to create a graphic message which more adequately communicated the concept of a spider record. By flexibly transferring his previously constructed knowledge to an entirely new use in this event, Gibson demonstrated the ability to generate new hypotheses in order to meet the needs of specific communicative situations.

Example 3 also provides an illustration of the *multidimensional* nature of the intertextual linkages children formed as they engaged in literacy events. The spider record event represents the intersection of conceptual themes related to spiders and records and processual themes related to drawing spiders and cutting bagels. Also involved was Gibson's knowledge of the social uses of literacy (e.g., the creation of an arena for working out his newest ideas, and the initiation of positive social exchanges with other authors). In order to create a spider record, Gibson flexibly connected *multiple* aspects of his past cognitive, interactive, and graphic texts.

The striking thing about this picture of Gibson's learning is that each event involves intertextual connections between several learning themes, but there is no *single* simplifying structure which predicts how these hypotheses should be combined in the particular situation of use. For example, it is unlikely that Gibson has developed routinized schemata which tell him what process he should use when he needs to portray a spider record. There seems to be no simple way to describe how existing texts should be combined to fit literacy events of this type; that is, there is no *single* simplifying rule

which describes the content, processes, and purposes of literacy will relate to one another, nor is there one simplifying rule which describes how authors should combine knowledge domains, communication systems, or social interactions to achieve their goals as authors. Instead, events are multiply and nonhierarchically interconnected. Though there are commonalities across situations, children must combine parts of several hypotheses to guide their communication in specific literacy events.

Spiro's (Spiro, 1985; Spiro & Myers, 1984; Spiro, et. al, in press) recent work on learning in ill-structured situations provides some suggestions about the nature of the intertextual connections learners make in complex interactive contexts such as the classroom in which this research was conducted. He defines ill-structured domains as those where "there are no rules or principles of sufficient generality to cover most of the cases; . . . [where] hierarchical relations of dominance and subsumption are inverted from case to case; . . . [where] the same features assume different patterns of significance when placed in difference contexts." (1985, p. 6) In such situations learners have no prepackaged knowledge structures (schemata) already constructed to guide their thought and actions. Instead they adapt their knowledge flexibly to varying contexts. He theorizes that this is possible because learners are able to encode information from cases in a multiperspectival fashion, and then to flexibly see connections between these events to meet the neds of specific situations. Such encoding yields a highly interconnected knowledge base "in which fragments of knowledge are moved about and <u>assembled</u> to fits the needs of a given <u>context</u> of application. Instead of prepackaged schemas, purpose-sensitive situational schemas are constructed, thus allowing knowledge to be used in different ways on different occasions, for different purposes. The emphasis is shifted from prepackaged schemas to the ingredients for many potential schemas" (in

press, p. 6). It is the assembling of parts of many different cases which allow learners to make sense of the unique and oft-changing contexts where their knowledge must be applied.

Spiro has not commented on whether he extends the possibility of such multifaceted processing to young children. However, I would argue that the natural interactive environment in which children are born possesses many ill-structured features. In order to learn about the world, and in order to learn to speak children must be using flexible intertextual processes of this sort. As research on oral language learning has shown (DeVilliers & DeVilliers, 1979; Lindfors, 1980), children are not using an inflexible set of rules learned from adults, instead they are adaptively constructing ways of 'meaning' which fit particular situations. Their learning is marked by the ability to make connections, and to link their past experiences in new ways. Because speaking is a part of almost every interactive experience, they have many opportunities to build rich networks of connections, and to test their hypotheses in different contexts of situation. The result is a language system which allows even young children to express their ideas in context appropriate ways.

In a literate society, children have similar opportunities to construct literacy knowledge at home before they enter school. In the classroom where this research was conducted, children also encountered complex literacy processes in use and had many opportunities to form hypotheses about literacy. The patterns in children's literacy learning described above have led me to hypothesize that as children formed new communicative goals they flexibly combined various aspects of their existing knowledge, or linked their existing knowledge to available demonstrations, to construct situation-based hypotheses which more adequately met their communicative goals. To

accomplish this, they constructed intertextual connections among concepts and processes which were related in complex and nonhierchical ways.

Two final patterns in the intertextual connections made in this setting illustrate the multimodal nature of these linkages. As children engaged in activities at the writing table, the art table, and the piano, they often made use of multiple communication systems to send their messages. They also expressed knowledge gained through one communication system through alternate modes of communication. An example of the integration of multiple communication systems comes from Gibson's construction of a spider book complete with pictures, words, and music as described earlier in this paper. Children in this classroom frequently combined communication systems in a culturally appropriate manner to create multimodal messages. The second pattern of multimodal linkages required children to express their knowledge in a new mode of communication. Justin illustrates this pattern in Example 4 when he decides to write a book using elements from the movie, *The Wizard of Oz*, which he has seen the night before.

Example 4: The J and The Wizard of Oz
Monday, February 17, 1986 (Videotape 21)

Justin and Cene have been playing together and they come to the writing table. Justin arrives singing, and takes a blank book from the holder.

"A book" he says.

"The title is. . ." He writes JUSTIN M on the cover.

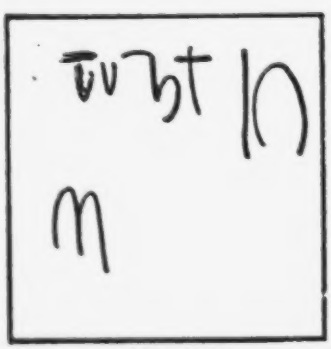
"That's the title, and the title is Justi Morgan." (Artifact 4A)

"Once there was . . ." He begins writing on the first inside page, stops. "I didn't do that!" He turns back to the front cover and colors over the J in his name, making it darker and thicker.

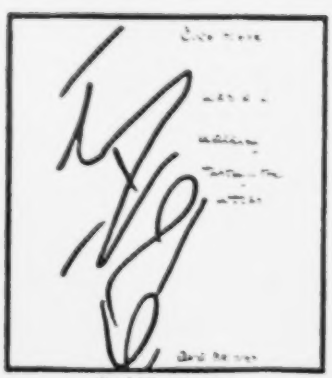
He turns back to page 1. *"Once there was a J".* (Artifact 4B)

"Once there was a J walking through the [sound effects] woods." As he talks about the woods he fills page 1 with squiggly lines. Cene leans over to watch. (10) *"And he met a . . "*

"A pig!" Cene suggests.



Artifact 4A

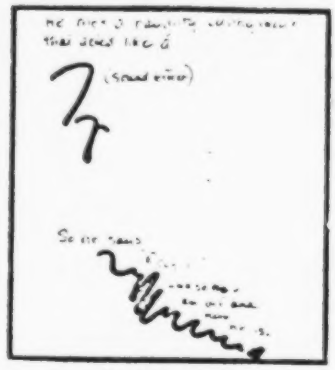


Artifact 4B

"*He met a naughty bunny rabbit that acted like a (* * *).*" (Artifact 4C) With this last unintelligible word he has turned the page and recorded it at the top of page 2. He continues at the bottom of the page.

"*So he says Roooooaaaa, and so the J ran off and here he is.*"

The new line of writing squiggles along quickly as the J runs, and ends with the letter J at the bottom right corner. He stops to write over the J several times. As he turns to page 3 he makes some more sound effects and begins the narrative again. (Artifact 4D)



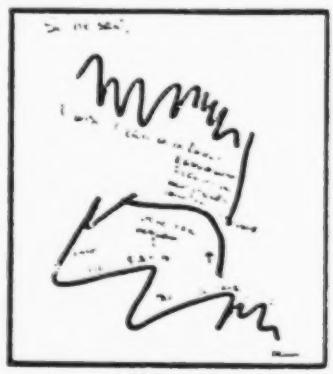
Artifact 4C

"*So he said, 'I wish I can be in Candy -- Kansas where I can see my best friends . . . Hana Johnson and Dorothy Gale'.*"

He begins writing with the J's dialogue. He uses up and down squiggles until he comes to the end of the line and then concludes his statement about "Dorothy Gale" with a final vertical line.

"*So he <u>ran very fast</u> and he got the Wizard of Oz . . .*"

He begins the new sentence on the right side of page 3, just below his last mark and continues counter clockwise, ending the line at the bottom right corner. While the J is running Justin's voice is loud and excited and his writing is fast as well. When he begins to write about the Wizard of Oz, his voice drops almost to a whisper. At the end of this line, he pauses as if considering what should happen next. He turns to page 4. (Artifact 4E)



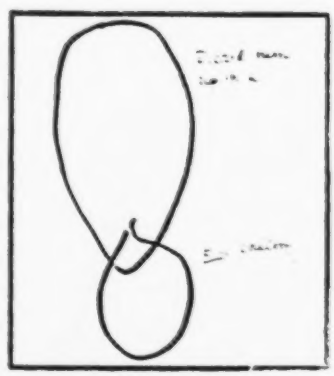
Artifact 4D

"*Picked him up in a <u>big</u> balloon.*"

He draws the balloon as he talks, then turns to page 5. (Artifact 4F)

"*He went off [high squeeky sound effects] and he went across and he went Shooom! right to his puppy. . .*"

As before the marks on the paper indicate the movement of the balloon. The high squeeks are accompanied by little zig zags in the middle of the page. When the balloon goess "across", he draws the line from left to right across the page. Then the line moves to the top of the page in preparation for the final quick blast of movement which he accompanies with sound effects, "Shooom!" He adds the line about the puppy as he is turning to page 6 (Artifact 4G) and pauses in the middle of the work until he gets it positioned so he can continue.

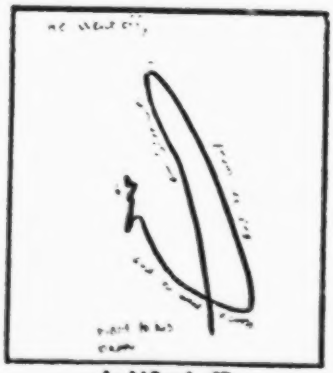


Artifact 4E

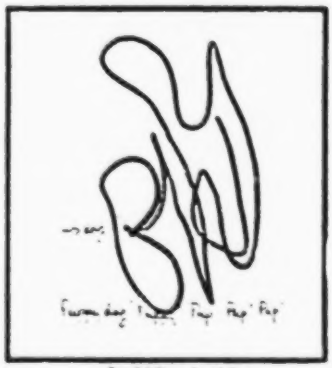
He finishes his thought, ". . *dog.*" Now he begins to use a high pitched voice as if the J is calling

for his dog. *"Puppy dog! Puppy! Pup! Pup! Pup!"* He records the search with wandering circular lines. This is the last blank page in the book, so he turns to the back side to finish his story.

"And he was happily every after with the (J)." (Artifact 4H)



Artifact 4F



Artifact 4G

Artifact 4H

Viewing the movie, *The Wizard of Oz*, the night before this event and dramatizing the story with his classmates earlier in the day gave Justin the idea of using elements of the story in his own book. Though he selected some content elements from the movie, he combined these elements with others from his own experience and expressed them with different processes. He selected characters (Dorothy Gale, a puppy dog), locations (the woods, Oz, Kansas), a sequence of events (traveling through the forest to Oz, leaving on a balloon, losing Toto), and even some dialogue (e.g. "I wish I can be in Kansas where I can see my best friends . . ") from the movie. Then from his own experiences he added characters (the J, Hana, and a naughty bunny rabbit) and a description of the balloon's movement which is more the like a rocketship than the gentle ascent of a hot air balloon. In so doing he linked the *Wizard of Oz* to his personal stock of stories--some from his own life experiences and some from books, cartoons, and his imaginiation.

Beyond the intertextual connections related to content, Justin had to make another type of connection in order to use these elements in

his text. Because he chose an expressive medium (i.e., art) which differed from that of the original text (i.e., cinema), he had to form new hypotheses about how this content could be expressed in a new medium--a process termed transmediation (Siegel, 1984,1985). Since different sign systems communicate different aspects of meaning (Eisner, 1982), the need for innovative hypotheses is often acute when forming intertextual ties between concepts originally experienced through different modes of expression. For example, Justin had to construct graphic signs for the physical movements of objects and actors in the drama, and for the emotion expressed in their voices. He chose to portray the movement of the characters by the movement of his pen and excitement by the the speed and size of his marks. These are aspects of experience not portrayed easily in graphic art using societal conventions, so Justin had to invent his own hypotheses about how these meanings could be expressed in drawing. Together, these observations suggest that children are able to flexibly combine knowledge formed in a variety of modes of communication to meet the needs of communicative situations.

CONCLUSIONS

My observations of the literacy learning of this group of 3- and 4-year-olds over an 8 month period indicate that there were two general types of intertextual connections which were important in literacy learning in this setting. The first type of connection occurred when children linked their existing knowledge about literacy to the demonstrations provided by other authors. The process of mutual intertextualizing which occurred through conversation and demonstration led to the formation of shared meanings about literacy and allowed members of the same authoring community to use literacy to communicate with others. The second type of intertextual connection reflected the mediated nature of literacy learning. Children

interpreted their experiences by flexibly linking their current observations to aspects of their past experiences creating context-specific hypotheses about literacy. These linkages were observed to be multidimensional and multimodal.

In considering the implications of these observations for educational practice, it must first be noted that ethnographic research generates hypotheses which are grounded in the specific context in which the data is collected. Therefore, the transferability (of generalizability) of the conclusions I have drawn from this study must largely be left to those who wish to apply them in other settings. (Additional details about the context in which this data was collected may be found in Author, 1986). However, since the children in this classroom have been shown to be flexible and active learners, I would like to point out several characteristics of the curricular environment which appear to be especially supportive of this type of learning. First, children were able to build shared meanings about literacy because they were encouraged to make use of the demonstrations provided by their peers and teachers, and because they had many opportunities to talk about these demonstrations in the context of activities which were functional and understandable. Informal interaction between authors played an important role in literacy learning in this classroom. Second, the teachers' expectation and acceptance of varied responses to literacy events supported children's learning. By planning for open-ended literacy activities in which children chose their own focus, teachers encouraged children to pursue those hypotheses which they currently found most interesting, and which were most related to their existing knowledge. Since children's existing hypotheses *participate* in the learning process, it is vital that children recognize the ways in which literacy activities are linked to their existing knowledge about the content, processes, and purposes of literacy. Third,

the teachers' decision not to present preformed generalizations about literacy encouraged children to construct their own complex hypotheses about communicating. In addition the opportunity to pursue these hypotheses in many different types of literacy events over an extended period of time allowed children to form a richly interconnected network of knowledge related to their personal learning themes. And fourth, the curricular environment in this classroom encouraged children to construct links between meanings expressed in different modes of communication by providing opportunities for observing both artifacts and face-to-face demonstrations of the ways these systems are combined in our society. Together these curricular characteristics supported children in forming complex intertextual connections as they learned about literacy.

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Figure 1

Data Collection Procedures

	Duration	Focus	Techniques
Phase 1	1 month 4 days/week	Field Entry Negotiating my role as researcher and teacher Becoming familiar with the setting	Participant/Observation Field notes after exit Collection of artifacts Informal interviews with teachers
Phase 2	3 months 3 days/week	Developing hypotheses	Participant/Observation Field notes in setting Collection of artifacts Audio tape Photographs Informal interviews with teachers and children Indefinite triangulation
Phase 3	2 months 3 days/week	Theoretical Sampling to further develop and refine hypotheses	Participant/Observation Field notes in setting Collection of products Audio tape Photographs Video tape Informal interviews with children and teachers Indefinite triangulation
Phase 4	2 months 2 half days/week	Field Exit Refine hypotheses	Field notes in setting Indefinite Triangulation

Figure 2

Shared Meanings About the Content and Genre of Literacy Events

WRITING TABLE	ART TABLE	PIANO
Genre	Genre	Genre
Surveys	Pictures	Instrumental songs
Newspaper articles	Hats	Vocal/instrumental songs
Signs	Bracelets	Dance
Picture books	Kites	Written music
Wordless books	Tape/paper constructions	
Song books	Machines	
Written music	Tickets	
Personal letters		
Maps		
Signatures		
Reminder notes		
Sign-up sheets		
Sign-in sheets		
Content Themes	Content Themes	Content Themes
Rainbows	(Same as for writing table.)	Songs learned at school
Snowflakes		Songs learned at home
Spiders		Personal compositions
Hearts		
Bears		
Cookie Monster		
Wizard of Oz		
Holidays		
Voltron		
People (friends & Family)		
Dinosaurs		
Animals		

Figure 3

Gibson: Two Learning Themes